ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR

December 2002

Responsiveness Summary for Public Questions and Comments on the Construction Permit Application from Kendall New Century Development

Site Identification No.: 093801AAN
Application No.: 99020032

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INTRODUCTION

Kendall New Century Development L.L.C. (KNCD) submitted an application for an air pollution control construction permit for a natural gas fired power plant on Corneils Road, approximately 2 miles northwest of Yorkville. The proposed project is considered a major source of air emissions and is subject to the federal rules for Prevention of Significant Deterioration of Air Quality (PSD) 40 CFR 52.21.

Upon review of comments received during the public comment period and final review of the application, the Illinois EPA has determined that the application meets the standards for issuance of a construction permit. Accordingly, on November 27, 2002, the Illinois Environmental Protection Agency (Illinois EPA) issued a permit to KNCD to construct the proposed facility. The facility must be constructed and operated in accordance with applicable regulations and the conditions of the permit.

DESCRIPTION OF PROPOSED PROJECT

The proposed facility would have eight combustion turbines with a nominal total output of up to 664 megawatts of electricity. The turbines would be installed in a simple cycle configuration. Emissions would be minimized by the low emitting character of the turbines.

COMMENT PERIOD AND PUBLIC HEARING

The Illinois EPA Bureau of Air processes applications for permits for sources of emissions to the atmosphere. An air permit application must appropriately address compliance with applicable air pollution control laws and regulations before a permit can be issued. Following its initial technical review of KNCD's application, the Bureau of Air made a preliminary determination that the application met the standards for issuance of a construction permit and prepared a draft permit for public review and comment.

The public comment period began on April 25, 2002, with the publication of a notice in the Kendall County Record. Notices were also published in this paper on May 2, and May 9, 2002. A public hearing was held on June 12, 2002 at the Beecher Community Building in Yorkville to receive oral comments and answer questions regarding the application and draft air permit. The comment period remained open until July 12, 2002 to receive written comments.

AVAILABILITY OF DOCUMENTS

A copy of the issued permit can be obtained from the Illinois Permit Database, **www.epa.gov/region5/air/permits/ilonline.htm** (please look under All Permit Records, PSD, New) or by calling the contact listed at the end of this document.

APPEAL PROVISIONS

The permit being issued for the proposed facility provides approval to construct pursuant to the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21. Accordingly, individuals who filed comments on the draft permit or participated in the public hearing, may petition USEPA to review the PSD provisions of the issued permit. In addition, as comments were submitted on the draft permit for the proposed facility that requested a change in the draft permit, the issued permit does not become effective until after the period for filing of an appeal has passed. The procedures governing appeals are contained in the Code of Federal Regulations, "Appeal of RCRA, UIC and PSD permits," (40 CFR 124.19). If an appeal request will be submitted to USEPA by a means other than regular mail, refer to the Appeals Board website at www.epa.gov/eab/eabfaq.htm#3 for instructions. If an appeal request will be filed by regular mail, it should be sent on a timely basis to the following address.

US Environmental Protection Agency
Clerk of the Environmental Appeals Board
MC 11038
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001
Telephone: 202/501-7060

CHANGES BETWEEN THE DRAFT AND FINAL PERMITS

Condition 10(b)(iii)(C): Provisions for testing emissions of hazardous air pollutants (HAP) were revised to make the requirement clearer and to allow testing to be performed only for formaldehyde provided a test method specifically developed for formaldehyde is used.

Condition 10(e)(iv)(D): The provisions for emission test reports were revised to include information on turbine burner settings during testing.

Condition 16(c): Requirements were added for reporting of gainful operation of a turbine, followed by submittal of diagnostic emission measurements if emission testing is not performed within 60 days.

QUESTIONS AND COMMENTS

Background Questions

1. How will the proposed gas turbines make electricity?

A gas turbine is a rotary engine in which fuel is continuously burned with the force of the hot combustion gases as they expand pushing on a series of blades to rotate a shaft. When used in a power plant, the power shaft is connected to an electrical generator.

2. What is the difference between so-called "simple cycle" and "combined cycle" turbines?

A "simple cycle" turbine consists only of a gas turbine as described above, in which the hot exhaust gases exhaust directly to the atmosphere, without using boilers to recover the thermal energy remaining in the gas. In a combined cycle turbine, the hot exhaust gases discharged from the turbine do not go directly to the atmosphere but instead are ducted through a waste heat boiler and used to make steam. This steam is then used to drive a steam turbine generator, to produce more electricity, which increases the overall electrical output of the system compared to the gas turbine by itself.

The generation and use of steam in this manner in a combined cycle turbine system increases its energy efficiency by about 50 percent compared to a simple cycle turbine. However, the greater efficiency and lower fuel cost with a combined cycle turbine come at a higher capital cost for the additional equipment, including the waste heat boiler, the steam turbine generator and a cooling tower to condense and reuse the steam. These features are not present with a simple cycle turbine. This means that simple cycle turbines, which are less efficient and more costly to run than "combined cycle" turbines, are used at peaking power plants, which will not run sufficient hours to make the capital investment for the more expensive combined cycle turbine worthwhile.

Nature of Proposed Facility

3. The turbines are much larger than the average turbine used for peakers.

The turbines at new peaking facilities include small units (40 to 50 MW), midsize units (80 to 90 MW), and large units (135 MW to 170 MW). The turbines at the proposed facility would be in the midsize range at about 80 MW each and similar in capacity to the turbines at a number of peaker plants, including the Crete Energy Park, Lee Generating Station, Lincoln Generating Station and Piatt County Power.

4. The proposed facility does not fit the Illinois EPA's definition of a peaker plant. The Illinois EPA's definition of a peaker plant is clear and concise and can be found in the hearing record for other proposed facilities, that is, a peaker plant is an electric power plant that operates during daylight hours predominantly on hot summer days. The proposed facility does not fit either of these terms.

The proposed facility would constitute a peaker plant, as the Illinois EPA's generally understands the meaning of that term. In other proceedings, the Illinois EPA has explained that peaker plants are not intended for routine daily operation. Rather, peaker plants operate when other types of power plants (base-load plants, i.e., nuclear plants and large coal-fired plants, and cycling plants, i.e., smaller coal-fired plants, old gas and oil-fired plants, and new combined cycle turbine plants) cannot meet the demand for electricity. This typically occurs due to very high levels of demand for electricity. Thus in Illinois at the present time, peaker plants typically operate on hot summer weekdays when the demand for electricity is at its highest because of the

added power demand for air conditioning on top of normal weekday demand. If power is needed from a peaker plant, units startup in the morning as the demand for power grows and shutdown in the evening or early night as the temperature and demand for power fall. Because of this, some peaker plants are not even designed for nighttime or cold weather operation.

On the other hand, many peaker plants are designed to be available whenever additional power is needed and as such can operate at any time of the year to prevent a shortage of electricity. This capability is desirable, at least from some peaker plants. This is because the plants can fill in when the available base-load and cycling plants are not sufficient to meet demand for electricity due to outages of some power plants from breakdowns or scheduled maintenance or due to interruptions in the power transmission grid. In this regard, all power plants must be periodically taken out of service for maintenance and repairs. While these outages can be planned for periods of lower demand, this does not assure that other operating plants do not then experience breakdowns or demand stays within predicted levels. Interruptions in the supply of power from operating plants cannot be prevented so that power shortages can only be avoided by having an adequate reserve source of power, as peaker plants provide.

The descriptions of peaker plants previously provided by the Illinois EPA in other proceedings are similar to the above description but vary in depth of detail and in wording. The descriptions contained in prepared remarks given at public hearings are always much shorter as this information may not be of particular interest to many people. Wording may vary based on the nature of the particular facility and the individual preparing the remarks. As such, these previous descriptions should certainly not be characterized as a definition, which suggests they have legal significance. Rather they were and continue to be an attempt to generally explain to the public the nature and role of proposed peaker plants in supplying electric power.

5. The facility proposed by Kendall New Century Development (KNCD) is not a peaker power plant. The maximum hours of operation stated by KNCD in its application indicate that the proposed facility is a load-following or base-load plant. In particular, operation for 23 hours daily is not consistent with a peaker plant. Furthermore, annual operation for 26,400 hours would allow the facility to run a combination of three turbines year-round.

The proposed facility would be a peaker plant. This comment ignores the nature of peaker plants and focuses on the fact that KNCD has applied for a permit that would allow turbines at the proposed facility to operate for as many as 26,400 hours total in a year, equivalent to 3,300 hours per turbine. Based on this fact, the comment assumes that the proposed facility would actually operate for this number of hours in a year on a routine basis. The comment does not provide any other support for this assumption. The comment also does not reflect any consideration of other constraints on the operation of the proposed facility, including specific restrictions placed on the proposed facility by the permit.

As already explained, peaker plants operate in response to the daily demand for electricity, which is uncertain, varying from day to day and year to year. The daily demand for electricity is affected by weather. It is affected by the activities and behavior of the consumers of electricity.

For peaker plants, the existence of demand for power on any day is also affected by the ability of other power plants to provide power, which is determined by the expenditures, skill and experience of the operators of these plants and the power grid, as well as by chance and misfortune. These factors are dynamic, as the providers of power and the consumers of power respond to and attempt to adapt in response to opportunities for profit or savings. Accordingly, one must expect significant differences between the hours of operation of a peaker plant in typical years and the "maximum" hours of operation a year when things do not go well and events favor the peaker plant.

In addition, experience with other peaker plants, i.e., plants with simple cycle turbines, confirms that these turbines function as peaking units with relatively low hours of actual operation each year, even if the units are permitted for more hours, in many cases, far more hours of operation. This is readily demonstrated by looking at the sister plant of the proposed facility, Allegheny' Lincoln Generating Station near Manhattan, Illinois, which began operating in 2000. This facility is subject to a similar limitation on operating hours as requested for the proposed facility. However, its actual operating hours have been substantially less than allowed.

Unit	Lincoln Generating Station Actual Hours of Operation		
	2000 (partial year)	2001 (full year)	2002 (through September)
1	50.25	294.25	178.50
2	67.75	273.00	175.50
3	66.75	303.75	154.75
4	76.25	266.75	146.50
5	66.50	229.50	150.50
6	61.50	220.00	92.75
7	65.50	170.50	75.00
8	62.25	153.50	60.00
Total (8 Units)	517	1960	1034
Average Per Unit	64.6	245.0	129.2

Information from the federal Acid Rain Program, as reported to USEPA

This difference between maximum operation as requested by a permit applicant and actual typical operation is presumably the result of two factors. First, sources generally try to obtain permits that are ample to cover any conceivable call for the product or service that they can provide. To the extent feasible, sources do not want to be blocked from carrying out business by an operating or production constraint in a permit. For the operator of a peaker plant, this could mean the difference between being able to legally operate and profit from an unexpected extended outage of a major baseload power plant and being at competitive disadvantage and some legal risk as it attempts to help fill in during such an event.

Second, high permitted hours of operation enable peaker plants to enter into contracts with electricity providers in which they can guarantee to provide power for any potential period of shortfall. In particular, an electric company or community could contract for power from the proposed facility and be confident that the facility could provide power for the entire summer if

needed. Such a contract would not indicate a desire to actually obtain power from the facility, since the actual cost for other power would normally be less expensive. Rather the contract would serve as a reserve or "insurance policy" if other power suppliers failed or defaulted. Accordingly, such a contract would also allow an electric company to be confident that it could reliably meet its customers needs, an important goal for an electricity supplier. It could also allow the electric company to meet formal requirements for reserve generating capacity as set by an electricity reliability council.

Experience with other peaker plants also confirms that they either normally operate with all or many of their units at the same time to meet the demand for power or are idle. They do not operate a few units continuously or stagger operation of units so that a few units are always operating.

6. The proposed facility far exceeds the average number of operating hours for the average peaker plant.

The Illinois EPA does not believe that the actual operating hours of the proposed facility would be significantly different from or greater than those of other new peaker plants. In this regard, for the proposed facility, KNCD has further explained that operating hours ranging between 1,000 and 2,000 per year would most likely represent the majority of operating years. This is not inconsistent with information provided for other proposed peaker plants.

In addition, as with maximum hours of operation, the information provided for average or typical operation of the proposed facility should be considered in context. As an applicant for a proposed peaker plant, KNCD can only predict the plant's average or typical operation. An accurate prediction must attempt to consider future weather conditions, fuel prices, growth in electric demand, power transmission problems and all the other factors that affect actual operation of peaker plants. This analysis and the resulting detailed predictions are information that KNCD would not want to make available to its competitors. KNCD has also expressed concerned that information on average operation would be misapplied to limit operation of the facility. KNCD should also be concerned that information on average operation is not perceived as understating and misrepresenting the likely operation of the facility. Thus, statements about typical operation of the proposed plant, like those for other proposed peaker plants, should be looked at as broad statements about expected operation.

Best Available Control Technology (BACT) and Other PSD Requirements

7. KNCD has to apply for a permit that reflects its true nature. Because the proposed facility would not be operated as a peaker plant, but as a load following facility, it should be subject to BACT for load following facilities. As such it should be made to be a combined cycle facility using catalyst pollution control equipment.

This comment and related comments have not demonstrated that the proposed facility would operate as something other than a peaker plant. As has been discussed above, these comments

are not supported by a review of the nature and circumstances of power plants like the proposed facility, which use simple cycle turbines.

Accordingly, these comments do not provide a basis to apply BACT to the proposed facility as if it were something other than a peaking plant, as described by KNCD in its application. These comments do not show that KNCD has applied for a permit that does not reflects the true nature of the proposed facility or that the draft permit inappropriately establishes BACT for the facility.

8. Simple cycle turbines are not BACT for what KNCD is proposing. The Illinois EPA cannot argue that combined cycle turbines are more expensive to build and simple cycle plants are too expensive to run as base or load following plants. Obviously, KNCD made a cost analysis and has come to the conclusion that the savings on additional equipment of combined cycle turbines offset the higher expense of operating simple cycle turbines.

It is appropriate for the proposed facility to use simple-cycle turbines. BACT is generally a determination of the appropriate control measures for the emission units that have been proposed by an applicant, in this case, simple cycle turbines. A substantial burden applies as part of a BACT determination to change the nature of those emission units. To do so in this case, by requiring combined-cycle turbines, would constitute a fundamental change to the nature of the proposed facility. Physically, it would entail an increase in the size of the turbine units, fewer turbines units or an increase in the output of the facility, the addition of cooling towers, changes to the substation, or a different layout of the site. Operationally, it would almost certainly make the facility into a load following plant, with operating hours far greater than those of a peaker plant. There is not a reasonable basis to consider requiring such extensive fundamental change to the proposed facility, particularly as the proposed facility is similar to other new peaking facilities.

In addition, this comment does not provide any support for the claim that KNCD prepared a cost analysis of the type suggested. That claim ignores the fact that new power plants with combined cycle turbines have been developed in Illinois for operation as base and load following power plants. The existence of these other new plants indicates that developers of power plants find the additional investment in combined cycle turbines warranted for a plant that is planned to operate as a base or load following plant. Moreover, the proposed facility will not be able to directly compete with these other new plants to meet base or intermediate electric power demand, as the proposed facility will not be equipped with more fuel-efficient combined cycle turbines.

9. KNCD's cost analysis for a catalyst system for control of emissions of carbon monoxide (CO) from the turbines is flawed. I compared its analysis (application, page 2-21) to a recent Indeck application and several items stand out, as explained below. After correcting for these points, the result is an acceptable cost for CO emissions reduction. The Illinois EPA has to require KNCD to submit an amended analysis and be truthful with its data. The Illinois EPA has to require KNCD to install CO catalyst systems.

A) KNCD used inflated prices for Operating Labor, Supervisory Labor, and Catalyst Replacement. Hourly wages for labor in Illinois are closer to $30 as in Indeck, than $45 as KNCD proposes.

B) The equipment cost at $920,000 per turbine is $163,000 higher than Indeck's.

C) Although the turbines are limited to 3300 hours of annual operation, the cost analysis assumes and bases the cost on 8760 hours.

D) Catalyst life is limited to three years of year round use but KNCD will use it only for 3300 hours and that extends the life span to almost eight years and reduces the replacement cost from $488,750 to $238,950, which also lowers this annualized cost from $186,240 to $61,876.

E) Maintenance cost is based on 8760 hours of operation. Proper calculations reduce the cost from $49,140 to $8,250 (1 1/2 shifts, 137.5 days @ $30 x 2 for material cost, 100% of maintenance labor)

Accordingly, the annualized cost of a catalyst system is not $664,500, but $242,795, and the cost effectiveness of the system is therefore $2,784/ton.

(The catalyst efficiency is 88% (page 2-21). Applying this efficiency to the permitted annual CO emissions of 99.61 tons yields 87.26 tons controlled, not 76.6 tons as KNCD claims. Annualized cost of $242,795 divided by 87.27 tons controlled yields a cost-effectiveness of $ 2,784/ton.)

The comment does not support adjustments to the analysis that would alter the determination of BACT for the proposed facility. First it should be noted that for the proposed facility, the cost-effectiveness analysis of a catalyst system evaluates whether such a system, which has not been required of other similar new plants, should be required. Thus the purpose of the cost analysis is to determine whether the circumstances of the proposed facility are such that the control technology under consideration is either significantly more effective or less expensive than at other similar new plants. This shifts the nature of the analysis as compared to an analysis whose intent is to demonstrate that a control technology in common use elsewhere should not be applied at a proposed facility.

With respect to the cost analysis itself, the comment does not provide any support for transferring an equipment cost from an unidentified Indeck application to the cost analysis for the proposed facility. This support is necessary because the Indeck projects in Illinois involve use of Siemens Westinghouse turbines, most recently in a phased simple cycle/combined cycle configuration at Indeck-Bourbonnais, rather than General Electric turbines in a simple cycle only configuration, as at the proposed facility. In such circumstances, preference must be given to a project-specific cost quote, as provided by Engelhard for this project and included in the application, rather than a cost quote for an entirely different project.

Support is also lacking for the suggested approach to maintenance and operating costs and catalyst replacement. The underlying technical issue is whether these costs correlate directly with turbine operating hours, or are fixed costs or related to other factors, such as the number of startup/shutdown cycles. In this regard, it is reasonable to treat much of the maintenance cost as a fixed expense, i.e., employees or contractors must be hired and available to perform maintenance to keep the turbines available for operation irrespective of the actual hours of operation. It is also reasonable to expect that startup/shutdown cycles, which place thermal stresses on a bed of catalyst, cause faster deterioration of a catalyst than continuous operation at a uniform temperature. This is the approach that KNCD has taken. Support for this approach is found in the cost-effectiveness analysis for the proposed Indeck-Bourbonnais facility, likely reviewed by the commenter. Because of the phased nature of this project, two analyses were provided, one for limited operation and another for continuous operation, but the costs for maintenance and catalyst replacement were identical for both scenarios. Support for this approach is also found in the cost-effectiveness analysis for the Duke-Lee County facility, mentioned in later comments.

Further, it should be noted that the cost-effectiveness analysis prepared for the proposed facility is extremely conservative as it overstates the reduction in CO emissions that would be achieved with a catalyst system. This is because it is based on a permitted level of CO emissions, rather than a more realistic scenario for the most the facility actually would operate and emit. If adjustment were made to account for a more realistic or typical scenario, the cost-effectiveness of a catalyst system would be several times higher and less beneficial that the calculated value.

10. The proposed limit for CO emissions, 0.060 lbs/million Btu, does not constitute good combustion practices and is not BACT. The Construction Permit issued to Duke Energy's Lee Generating Station, which has the same type of turbine that KNCD proposes, limits CO emissions to 0.055 lbs/million Btu. In addition, KNCD will not be required to use good combustion practices because the hourly emission limits for CO and PM in the draft permit exceed those in the Duke Lee permit. Failure to impose limits like those set for Duke Lee would constitute failure to require good combustion practices. For this reason, the Illinois EPA has to deny the KNCD permit.

The CO limit set for KNCD requires use of good combustion practices. A comparison of the BACT limits for the KNCD and the Lee Generating Station (Lee) projects should address more than the CO limit. In particular, KNCD is subject to a more stringent NOx limit, i.e., 9 ppm, 3-hour average, compared to Lee at 15 ppm, hourly average, and 12 ppm, annual average. Emissions of NOx and CO from combustion units, like turbines, generally have an inverse relationship, so NOx emissions go down as CO emissions go up. Because of this, the BACT determination must "simultaneously" establish appropriate emission limits for both NOx and CO. For the proposed KNCD turbines, while the CO limit would be somewhat higher than the limit for similar turbines at Lee, the NOx limit is significantly lower. The slightly higher CO emission limit is a reasonable consequence of the lower NOx limit. It does not indicate that good combustion practices would not be required for CO. In addition, the BACT limit for PM set for KNCD, 0.014 lb/million Btu, is more stringent than the limit set for Lee, 0.016 lb/million Btu. If

anything, the difference in these limits would suggest that KNCD is being required to meet a more stringent standard for use of good combustion practices.

The differences in "hourly" emission limits set for CO and PM for KNCD and Lee do not directly show any difference in requirements for good combustion practices. The hourly limits, expressed in lb/hour, reflect the maximum emission rates evaluated in the air quality impact analyses submitted for these projects. The differences in these limits are a consequence of the maximum emission rates selected by the applicant for these analyses. The difference in the selected hourly CO emission rates can be related to the CO BACT limit, as discussed above. That is, the hourly CO rate evaluated by KNCD is somewhat higher, to the same degree that the BACT limit for CO is somewhat higher. For PM, KNCD used a similar approach, analyzing the impacts of a PM hourly rate that is the product of maximum heat input of a turbine and the PM BACT limit. This is a higher rate than Lee selected for its analysis of PM impacts. In this regard, as KNCD evaluated a higher PM emission rate than Lee, it appears that KNCD took a simpler or more cautious approach to the hourly PM emission rate than Lee. In any event, this difference does not indicate that KNCD would not be required to use good combustion practices.

11. Does the Illinois EPA believe that KNCD intends to build the proposed facility? This is relevant because this is a PSD permit.

At this time, the Illinois EPA believes that KNCD intends to build the proposed facility, that is, there is a realistic prospect that the proposed facility would be completed. This is the relevant criterion for issuance of a permit under the federal PSD rules. This belief is based on KNCD's continued work, effort and expense, to obtain the necessary approvals and arrangements to allow construction of the facility to commence.

This is not to say that there is not uncertainty about the future of the proposed facility, given the current economic climate and the dynamic nature of the electric power supply. Like many economic ventures, the Illinois EPA expects that the economics of the proposed facility will continue to be evaluated and the final decision whether to actually build it will be made "at the last minute," based on the circumstances and available information at that point in time. Only then, will KNCD have to make a final determination whether there is a need for the proposed facility or whether existing power plants and other peaking facilities are sufficient to meet current power needs, so that the proposed facility's services would be underutilized and the facility would not be profitable.

Provisions of the Permit

12. Finding 3(b) in the draft permit indicates that the proposed facility is not subject to review under Section 112(g) of the Clean Air Act. This finding has to be based on more than the belief of the Illinois EPA. KNCD did not submit information on formaldehyde emissions nor does the draft permit require testing for formaldehyde. At a minimum, the permit needs to require testing for formaldehyde emissions and

provisions explaining the consequences should emissions exceed 10 tons/year, given that formaldehyde is the HAP of concern in gas fired power plants.

Moreover, in the past, the Illinois EPA has accepted estimates that formaldehyde constitutes 40 percent of VOM emissions. With this assumption, annual formaldehyde emissions from a facility are only less than 10 tons if the annual VOM emissions are less than 25 tons. However, the proposed facility is only limited to annual VOM emissions of 27.7 tons so would exceed 10 tons of formaldehyde. Based on this, the proposed facility should be addressed as a major source for HAP.

The VOM limit in the permit is sufficient to assure that the annual formaldehyde emissions from the proposed facility are less than 10.0 tons. Emission factors compiled by USEPA, which the Illinois EPA has relied upon for other projects for estimating formaldehyde emissions, indicate that formaldehyde generally constitutes at most one third of VOM emissions (33.8 percent). Accordingly, the VOM limit in the permit serves to assure that formaldehyde emissions from the proposed facility do not exceed 9.4 tons. In addition, KNCD has submitted further information from USEPA's Unified Air Toxics database, which addresses specific models of turbine, that shows that the formaldehyde emissions of the proposed facility would be less than a ton.

In addition, the draft permit did require testing for emissions of HAP, including formaldehyde (refer to Condition 10(b)(i)). This provision was enhanced in the issued permit to make this obligation clearer and to allow testing for only formaldehyde provided a test method specifically developed for formaldehyde is used.

13. The definition of a peaker plant in Condition 2(c)(iv) has been changed. There is no reference to hot days or daylight in the condition now, it only refers to insufficient capacity.

This is not the case. The provision is identical to the provision in the original permit. This provision, as it is a legal restriction on the operation of the proposed facility, allows the facility to provide power in circumstances when load-following and baseload plants cannot mean the demand for power. In addition to hot summer days, this also may include other times when these other plants are unable to meet the demand for electric power.

14. What is the annual average of NOx emissions? Condition 3(c)(i) sets a limit of 9-ppm hourly average for each turbine. What is the annual or monthly average?

The annual and monthly NOx emissions must also be less than 9 ppm, since the hourly emission limit is 9 ppm. As a practical matter, the monthly emissions must be somewhat less than 9 ppm and annual NOx emissions must be even lower, since NOx emissions during each hour are limited to no more than 9 ppm.

15. How does this permit deal with startup emissions?

The permit addresses start-up emissions. The source must use good air pollution control practices to control emissions during startup of the turbines. The source must also account for startup emissions when determining actual annual emissions of the facility.

16. The original construction permit for the proposed facility required the source to record burner settings, exit air pressure settings, etc., when testing is performed. This requirement is not present in the draft permit.

These provisions have been included in the issued permit.

17. Other permits for new peaker plants require the source to report the date of initial operation, because the required initial test will be done at a time when the plant gets paid a minimum for it power. Why isn't this requirement in this permit?

This provision is present in the permit (refer to Condition 16(a)). In addition, provisions have been included in the permit requiring reporting of preliminary emissions data within 45 days of beginning gainful operation of a turbine if formal tests have not been performed. These provisions are "new" provisions, which were developed for proposed peaker plants after the original permit was issued for the proposed facility.

18. The draft permit appears to allow the turbines to operate at a higher VOM emission rate when operated at or less than 70 percent load. If it is possible for VOM emissions to exceed the PSD threshold, additional conditions should be included in the permit to guarantee that VOM emissions stay within the PSD threshold or explain the consequences if the threshold is exceeded.

Additional provisions are not needed in the permit to address VOM emissions. The permit contains adequate operating and emission limitations to assure that the annual VOM emissions of the proposed facility do not exceed the permitted level of 29.3 tons, much less the PSD threshold of 40 tons. These limitations are accompanied by adequate compliance procedures, including testing of VOM emissions across the normal load range at which the turbines will operate and a provision restricting subsequent operation outside the normal load range for which VOM testing has been performed (refer to Conditions 4(a)(i)(B) and 10(b)(iii)(A).) While the permit does allow for a higher VOM emission rate when a turbine operates at or below 70 percent load, which would accommodate incidental low load operation of turbines, the source must keep records identifying the extent of such low load operation (Condition 14(b)(iii)). Accordingly, the higher VOM emissions during such operation can be identified and fully addressed when determining compliance with the annual limit on VOM emissions.

As a general matter, it is also inappropriate for the permit to further address the consequences if emissions from a project exceed a PSD threshold for a pollutant. If such an exceedance were to

occur, an enforcement action would be the appropriate context in which to fully address the consequences of the exceedance, given the surrounding circumstances. If in that action it were then determined that BACT should be used, BACT would be determined at that time, with a new permit application, additional opportunity for public comment, and a new or revised permit.

Administrative Procedures

19. KNCD applied for an extension of an existing permit but the Illinois EPA did not follow USEPA guidance on extension of PSD permits, a copy of which accompanied my comments. In particular, in Section 1.2, Administrative Requirements, this guidance states "The extension request must include an acceptable justification why the commencement of construction did not commence as scheduled. The request must also include a revised construction schedule which assures that construction will be initiated during the extension period and that construction will be continuous." The Illinois EPA should follow this guidance or alternately explain why it does not have to.

Although KNCD applied for extension of the original permit issued in January 2000, the Illinois EPA required KNCD to submit a new BACT demonstration and air quality impact analysis and reviewed the application as a new application, not as an extension of the original permit. As such, the USEPA Region IX's guidance on permit extensions is not applicable.

20. Because of the comments that were made on the draft permit, the Illinois EPA should prepare a new draft permit and reopen the public comment period.

The submittal of comments on a draft permit or changes in the issued permit in response to comments do not require the Illinois EPA to re-notice a draft permit.

FOR ADDITIONAL INFORMATION

Questions about the public hearing and permit decision should be directed as follows:

Public Hearing Procedures and Exhibits

William Seltzer, Hearing Officer
Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
217/782-5544

Responsiveness Summary (questions on or extra copies)

Bradley Frost, Community Relations Coordinator
Illinois Environmental Protection Agency
Office of Community Relations
1021 N. Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
217/782-7027